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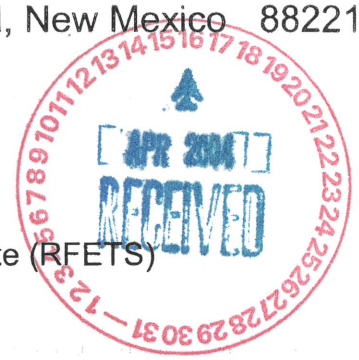

DATE: April 16, 2004

REPLY TO ATTN OF: CBFO:QA:DSM:GS:04-0090:UFC 2300.00

SUBJECT: Audit Report A-04-10, Rocky Flats Environmental Technology Site (RFETS) Characterization of Waste Certification Audit

TO: Joe Legare, Assistant Manager for Projects

The Carlsbad Field Office (CBFO) conducted a certification audit of the Rocky Flats Environmental Technology Site (RFETS) waste characterization activities. The audit was conducted on March 30-April 2, 2004. The audit team concluded that the RFETS technical and quality assurance programs for these activities were adequate in accordance with the WIPP Hazardous Waste Facility Permit, the CBFO Contact-Handled Transuranic Waste Acceptance Criteria for the WIPP, TRUPACT-II Safety Analysis Report, Revision 19c, TRUPACT-II Authorized Methods for Payload Control (TRAMPAC), Revision 19c, TRUPACT-II Certification of Compliance, NRC 71-9281, Revision 16, and the CBFO Quality Assurance Program Document.

The audit team also concluded that overall the RFETS procedures were being satisfactorily implemented and the evaluated processes were effective. No CBFO Corrective Action Reports (CARs) were issued as a result of the audit.

If you have any questions or comments, please contact me at (505) 234-7491.

D. S. Miehls

Dennis S. Miehls
Quality Assurance Specialist

Attachment

040410

cc: w/attachments
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CBFO QA Record File
CBFO M&RC

*ED denotes electronic distribution
CBFO:QA:DSM:GS:04-0090:UFC 2300.00

U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

AUDIT REPORT

OF THE

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

GOLDEN, COLORADO

AUDIT NUMBER A-04-10

March 30 – April 2, 2004

AUDIT REPORT OF WASTE CHARACTERIZATION ACTIVITIES
RECERTIFICATION AUDIT

Prepared by: _____ **Date:** 04/13/04
Charles L. Riggs, CTAC
Audit Team Leader

Approved by: _____ **Date:** 4/16/04
Ava L. Holland, CBFO
Quality Assurance Manager

EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Audit A-04-10 was conducted to evaluate the continued adequacy, implementation, and effectiveness of the Rocky Flats Environmental Technology Site (RFETS) transuranic (TRU) waste characterization activities relative to the requirements detailed in the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP) and the CBFO Quality Assurance Program Document (QAPD).

The audit team also evaluated RFETS activities associated with the characterization of the new Summary Category Group (SCG) S4000, Soils and Gravel. RFETS is the first site to be evaluated for SCG S4000.

The audit was conducted at the RFETS facility March 30 – April 2, 2004. The audit team concluded that overall, the RFETS technical and quality assurance (QA) programs applicable to audited activities were satisfactory in meeting requirements. The audit team also concluded that overall, the defined QA and technical programs for these activities were being implemented in accordance with the RFETS Quality Assurance Project Plan (QAPjP) and its implementing procedures, and that the processes were effective.

Eleven concerns were identified by the audit team. The audit team did not identify any conditions adverse to quality resulting in the issuance of a corrective action report (CAR). This is a marked improvement over earlier audits and demonstrates RFETS commitment to quality and the serious efforts undertaken to fine-tune their already excellent program. These efforts included a series of internal assessments coupled with individual organizational review of the checklists used by CBFO for the 2003 recertification audit and the checklists provided by CBFO for this audit.

Six deficiencies, isolated in nature and requiring only remedial corrective actions, were corrected during the audit (CDA). Three Observations and two Recommendations were also identified. The CDAs, Observations, and Recommendations are described in Sections 6.0 and 7.0.

SCOPE AND PURPOSE

Scope

The audit team evaluated the continued adequacy, implementation, and effectiveness of the RFETS TRU waste characterization and transportation activities. The audit team also evaluated RFETS activities associated with the characterization of the new SCG S4000, Soils and Gravel. The evaluations consisted of the following elements:

<u>Quality Assurance</u>

QA Program
Organization
Quality Improvement

Personnel Qualification and Training
Documents and Records
Software
Inspection and Test Equipment
Assessments
Sample Control
Work Processes
Procurement

Technical

Soils **(new)**
Acceptable Knowledge (AK)
Soils/Solids Sampling and Analysis
Headspace Gas (HSG) Sampling and Analysis
Project-Level Verification and Validation (V&V)
Nondestructive Assay (NDA)
NDA Multiple Purpose Crate Counter **(new for soils)**
Real-Time Radiography (RTR)
Visual Examination (VE)
VE Technique (VET)
WIPP Waste Information System (WWIS)
Performance Demonstration Program (PDP)
Building 440 Gas Generation Testing Program (GGTP)
Payload, Type B Packaging, and Transportation

General

Results of previous audits
Changes in programs or operations
New programs or activities being implemented
Changes in key personnel

The evaluation of RFETS TRU waste activities and documents was based on current revisions of the following documents:

Hazardous Waste Facility Permit Waste Isolation Pilot Plant EPA No. NM4890139088, New Mexico Environment Department

CBFO Quality Assurance Program Document, DOE/CBFO-94-1012

Contact-Handled Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant, DOE/WIPP-02-3122

TRUPACT-II Safety Analysis Report, Rev. 19c

TRUPACT-II Authorized Methods for Payload Control (TRAMPAC), Rev. 19c

TRUPACT-II Certification of Compliance, NRC 71-9281, Rev. 16

RFETS Quality Assurance Project Plan for the Transuranic Waste Characterization Program, 95-QAPjP-0050

RFETS Transuranic Waste Management Manual, 1-MAN-008-WM-001

Related RFETS technical and QA implementing procedures

Purpose

Audit A-04-10 was conducted to assess the level of compliance of RFETS waste characterization activities. The audit team also evaluated RFETS activities associated with the characterization of new SCG S4000, Soils and Gravel.

AUDIT TEAM, INSPECTORS, AND OBSERVERS

AUDITORS/TECHNICAL SPECIALISTS

Charlie Riggs	Audit Team Leader, CBFO Technical Assistance Contractor (CTAC)
Tommy Putnam	Auditor, CTAC
Annabelle Axinn	Auditor, CTAC
Porf Martinez	Auditor, CTAC
Norm Frank	Auditor, CTAC
Pete Rodriguez	Auditor, CTAC
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Todd Sellmer	Transportation Specialist, WTS

INSPECTORS

Ed Feltcorn	Environmental Protection Agency (EPA)
Behram Shroff	EPA
Connie Walker	EPA Contractor
Jim Oliver	EPA Contractor
Jerry Rossman	EPA Contractor

OBSERVERS

Steve Holmes	New Mexico Environment Department (NMED)
Kevin Krause	NMED
Carl Chavez	NMED
Connie Walker	NMED Contractor
Scott Webb	Environmental Evaluation Group (EEG)

AUDIT PARTICIPANTS

The individuals at RFETS who were contacted during the audit process are identified in Attachment 1. A pre-audit meeting was held at RFETS Building 115 on March 30, 2004. Daily meetings were held with RFETS management and staff to discuss the previous day's issues and potential deficiencies. The audit was concluded with a post-audit meeting held at RFETS Building 115 on April 2, 2004.

SUMMARY OF AUDIT RESULTS

Program Adequacy, Implementation, and Effectiveness

The audit team concluded that overall, the applicable RFETS TRU waste characterization activities, as described in the associated RFETS implementing procedures, are adequate, satisfactorily implemented, and effective. Attachment 2 contains a Summary Table of Audit Results. Audit activities, including objective evidence reviewed, are described below and in the CBFO checklists and/or Objective Evidence Reviewed forms. Attachment 3 contains a list of RFETS documents included in the audit.

Quality Assurance Activities

Organization and QA Program

The audit team interviewed management and quality management personnel and reviewed documentation to verify that RFETS met the requirements of the QAPD, Section 1.1, Organization and Quality Assurance Program. No concerns were identified.

Overall, Organization and the QA Program were determined to be adequate, satisfactorily implemented, and effective.

Personnel Qualification and Training

The audit team interviewed personnel and reviewed documentation to verify that RFETS met the requirements of QAPD, Section 1.2, Personnel Qualification and Training. No concerns were identified.

Overall, Personnel Qualification and Training were determined to be adequate, satisfactorily implemented, and effective.

Quality Improvement

The audit team interviewed personnel and reviewed documentation to verify that RFETS met the requirements of QAPD, Section 1.3, Quality Improvement. No concerns were identified.

Overall, Quality Improvement activities were determined to be adequate, satisfactorily implemented, and effective.

Documents and Records

The audit team interviewed personnel and reviewed documentation to verify that RFETS met the requirements of QAPD Sections 1.4, Documents, and 1.5, Records. One concern was identified concerning an obsolete record package that exceeded the six-month temporary storage requirement (CDA #4).

Overall, Documents and Records activities were determined to be adequate, satisfactorily implemented, and effective.

Work Processes

The audit team interviewed personnel and reviewed documentation to verify that RFETS met the requirements of QAPD, Section 2.1, Work Processes. No concerns were identified.

Overall, Work Processes were determined to be adequate, satisfactorily implemented and effective.

Procurement

The audit team interviewed personnel and reviewed documentation to verify that RFETS met the requirements of QAPD, Section 2.3, Procurement. No concerns were identified.

Overall, Procurement activities were determined to be adequate, satisfactorily implemented, and effective.

Inspection and Testing

The audit team interviewed personnel and reviewed documentation to verify that RFETS met the requirements of QAPD, Section 2.4, Inspection and Testing. No concerns were identified.

Overall, Inspection and Testing activities were determined to be adequate, satisfactorily implemented, and effective.

Assessments

The audit team interviewed personnel and reviewed documentation to verify that RFETS met the requirements of QAPD, Sections 3.1, Management Assessment, and 3.2, Independent Assessment. One concern was identified. It was recommended that the roll-up report no longer be sent to the Safety Assessment Center Manager (Recommendation 2).

Overall, Assessments activities were determined to be adequate, satisfactorily implemented, and effective.

Sample Control

The audit team interviewed personnel and reviewed documentation to verify that RFETS met the requirements of QAPD, Section 4, Sample Control Requirements. No concerns were identified.

Overall, Sample Control was determined to be adequate, satisfactorily implemented, and effective.

Software

The audit team interviewed personnel and reviewed documentation to verify that RFETS met the requirements of QAPD, Section 6, Software Requirements. Emphasis was placed on Waste Stream and Residue Identification and Characterization (WSRIC) and Waste and Environmental Management System (WEMS) data software. One concern was identified concerning the Master Software List, which had an incorrect description for the installation of a software application (CDA #5).

The audit team evaluated implementation of procedures with respect to software procurement, development, change control, and configuration management. The evaluation included a review of the RFETS life-cycle documentation of software that was developed under other QA programs and supplied by the vendor as a component of an overall analytical system. Change control and configuration management of vendor-developed software and RFETS-developed spreadsheet software for the HSG laboratory and NDA analysis were included in the audit evaluation. Review of software lifecycle documentation included software quality plans, design documentation, implementation documentation, verification and validation plans, test reports, and user manuals for analysis and reporting software. The audit team determined that software quality activities for vendor-supplied applications, as well as RFETS-developed spreadsheet software, were adequate and in accordance with procedures, including configuration management, change control, life-cycle document revision, change verification and validation, and installation and check-out testing as appropriate for the classification of the specific software application.

The audit team evaluated implementation of RFETS procedures for the generation and maintenance of data in the WSRIC database for entering and tracking generation process details and waste locations. The audit team verified that access to WSRIC is adequately controlled using assignment of roles for electronic data access and restricting modify/add permission. The audit team also verified that reviews, edits, updates, reactivation, archive, and approvals of characterization and reference data are adequately managed and completed using reviewed and approved WSRIC Change Request (WCR) documents in accordance with procedures. WSRIC characterization data were determined to be adequately circulated using building book sections.

The audit team evaluated implementation of RFETS procedures for the generation and maintenance of data in the WEMS database to track waste characterization data. The audit team verified that access to WEMS is adequately controlled using assignment of roles for electronic access to the database and to restrict modify/add permission. The audit team also verified that reviews, edits, updates, and approvals of characterization and reference data and changes to the WEMS software are adequately managed and completed using reviewed and approved Software Change Request (SCR) documents in accordance with procedure. The audit team determined that software problems are reported and evaluated, and that changes are initiated as appropriate and in accordance with procedure. The audit team determined that software verification and validation activities were adequately planned and documented for testing of changes to the WEMS software.

Overall, Software activities were determined to be adequate, satisfactorily implemented, and effective.

5.3 Technical Activities

The following sections describe the technical activities reviewed during the audit.

5.3.1 Acceptable Knowledge

The audit team evaluated both debris and solids waste streams and the initial certification for SCG S4000, Soils.

The audit team examined several AK source documents from the Dow Chemical era at RFETS that provided relevant information regarding the contamination on Pad 903, the source of the TRU soils waste stream. The audit team also reviewed the AK Summary document for this stream and drafts of the waste stream profile form and attachments. A total of six standard waste boxes (SWBs) were involved at that time, and the audit team examined batch data reports for three of the SWBs to reconcile the AK record and provide the permit-required traceability. Some discrepancies were identified in the AK source documents reviewed. RFETS staff prepared a discrepancy resolution memo and this concern was corrected during the audit (CDA #2). Appropriate changes will be made to the AK Summary document to address this issue and provide additional information on radionuclide content. The audit team provided a Recommendation for additional information to be included (Recommendation 1).

The audit team also examined AK objective evidence for two additional waste streams: TRM Low Grade Oxide (WSPF RF141.02), a solids waste stream, and TRM Metal Debris Wastes (WSPF RF102.01), a mixed debris stream with several assigned Resource Conservation and Recovery Act (RCRA) codes. In addition to reviewing the AK Summary documents, waste stream profile forms and attachments, and examples from the referenced AK source documents, the team conducted a traceability study on a container from each of these two summary category groups. Beginning with information from the WEMS database, AK information was traced back to WSRIC and/or Backlog Waste Reassessment Baseline Book (BWRBB) records on process.

Batch data reports for these containers were also examined. In addition, the audit team reviewed and collected objective evidence relevant to discrepancies in the AK record, discrepancies between the AK record and confirmatory test data, the discovery and mitigation of prohibited items in waste, internal audits, training of AK staff and how AK QAOs were met by reviewing, for example, the latest version of the AK Accuracy Report.

The audit team observed a discrepancy between RFETS and the Idaho National Engineering and Environmental Site (INEEL) on the issue of expected radionuclides in the RFETS waste, in particular Cs-137 (Observation 1). Cs-137 is listed as not expected in RFETS AK documentation as it was at INEEL until it was reportedly measured in several containers during NDA. The INEEL AK documentation was then revised to indicate that Cs-137 was expected but this change was not communicated to RFETS personnel. CBFO anticipates that this inconsistency will be resolved through the joint efforts of the two sites.

Overall, the AK process was determined to be adequate, satisfactorily implemented, and effective.

5.3.2 Headspace Gas

A walk-through was performed in Building 440 on March 30, 2004, for the existing units. HSG Sampling and Analysis using the online method was demonstrated for the auditors. Interviews were conducted with the HSG Laboratory Manager and the HSG Quality Assurance Officer. Two data packages were examined for work performed in Building 440 (HGAS-DP-00872 and HGAS-DP-00882) and no problems were noted. Training was verified and found to be adequate. Instrumentation was examined, calibrations checked, drum age criteria verified, laboratory notebooks audited, and standards verified.

Overall, HSG activities were determined to be adequate, satisfactorily implemented, and effective.

5.3.3 Radiography

The audit team examined the radiography equipment in Building 664 and the Mobile RTR unit. The audit team reviewed eight data packages and four of the associated videotapes. The content of radiography operator training and operator qualifications were reviewed.

Overall, the RTR process was determined to be adequate, satisfactorily implemented, and effective.

5.3.4 Visual Examination

The audit team examined the VE program used for the confirmation of RTR results. Three batch data reports were reviewed, along with the associated videotapes.

Because no containers were being examined during the time of the audit, operations were not observed. Training files for VE experts and operators were reviewed.

The audit team examined the RFETS Visual Verification (V^2) that utilizes the visual examination technique (VET) as described in the HWFP. Twelve data packages were reviewed. During the review of batch data report VV-991-00001, it was noted that two Pu/Be sealed sources had been packaged in an SWB. The shielding calculation relied on the bracing in the SWB to maintain the sources centered in the SWB at a surface dose rate below 200mR/hr. Relying on the bracing is not allowed by the TRAMPAC. The RFETS issued an NCR on this container (CDA # 1).

The audit team reviewed the RFETS corrective actions related to training deficiencies that were self-identified in the area of V^2 training (Plant Action Tracking System (PATS) identification number 2004-000074). The team determined that the corrective actions and associated NCRs had been properly documented and dispositioned.

Seven batch data reports for residue repackaging were reviewed and repackaging operator qualifications were verified. The RFETS has completed residue repackaging, but some operations were performed since the last recertification audit.

Overall, VE, VET (V^2), and residue repackaging were determined to be adequate, satisfactorily implemented, and effective.

5.3.5 Verification and Validation

The audit team reviewed V&V processes at both the data generation and project levels. The team examined several batch data reports including HSG, RTR, VE, Solids, Soils, and NDA for the containers used in the traceability study and also examined a VE QA batch data report and reviewed the corresponding RTR report to verify the comparison between VE data and nondestructive examination (NDE) data in association with the miscertification rate (CLF-005-04). The Site Project Manager (SPM) and Site Quality Assurance Officer (SQAO) checklists were properly completed and had appropriate supporting documentation.

Overall, V&V processes were determined to be adequate, satisfactorily implemented, and effective.

5.3.6 NDA

The specific NDA systems within the scope of this audit are listed below. The evaluation consisted of reviewing applicable site procedures to ensure they were consistent with the upper-level requirements (i.e., DOE/WIPP-02-3122, Revision 1). Since the pertinent RFETS procedures had been reviewed previously, the audit team began this evaluation by checking the current revisions of all procedures for changes since the last CBFO audit (i.e., A-03-03 or A-03-22 for the drum Tomographic Gamma Scanner (TGS) and Fixed Energy Response Function Analysis with Multiple Efficiencies (FRAM)) units. The following aspects of each NDA system were evaluated:

- Operational status, location, and condition of system
- System performance since last CBFO audit (i.e., number of containers [crates, drums and cans] assayed and completed batch data reports produced)
- Performance of instrument since A-03-03 or A-03-22 for the TGS and FRAM units
- Original instrument calibration and traceability of calibration sources
- Calibration confirmations and/or verifications, if applicable

  Applicability of system's calibration to waste type and radionuclide content of samples assayed since last CBFO audit
- Performance/sample matrix changes with the potential to affect each system's Total Measurement Uncertainty (TMU) and/or Lower Limit of Detection (LLD) for the 10 WIPP-tracked radionuclides
- Successful participation in the CBFO approved Nondestructive Assay Performance Demonstration Program (NDA PDP), when applicable

  Implementation and effectiveness of instrument/measurement controls
- A subset of the completed data packages generated since the last CBFO audit

This evaluation involved interviewing RFETS and contractor personnel, observing practices, and examining records. The audit team noted that page 19 of Data Report 664MP1-DP-050503, had a handwritten entry that had not been initialed and dated (CDA 6). All systems were found to be acceptable without reservation, as described below:

RFETS NDA Systems Evaluated

- Multipurpose Crate Counter (MPCC) 664MPCC01. Trailer-mounted MPCC system located south of Building 664, currently operational for SWBs. All checklist items were satisfactory, no issues outstanding.
- Super High Efficiency Neutron Counter (Super HENC) 440SHENC01. Trailer-Mounted SuperHENC system located north of Building 440, currently operational for 55-gallon drums and SWBs. All checklist items were satisfactory, no issues outstanding.
- Drum Tomographic Gamma Scanner (TGS) 664TGS04. Located in Building 664, currently operational for drums. Units TGS02, TGS03 & TGS05 (all can assay systems) have been taken out of service. All checklist items were satisfactory, no issues outstanding.
- Passive-Active Drum Counter (PADC) 440PADC01 (formerly the 569PADC01) and associated FRAM isotopic system (FRAM 02). Located in Building 440, currently operational. All checklist items were satisfactory, no issues outstanding.

- Fixed Energy Response Function Analysis with Multiple Efficiencies (FRAM) 440FRAM01. Located in Building 440, used for quantitative analysis. All checklist items were satisfactory, no issues outstanding.
- CAL/GAMMA calorimeters and TRIFID gamma isotopic measurement systems. Previously located in Building 707 and later in Building 371, all systems were out of service at the time of the audit. All checklist items were satisfactory, no issues outstanding.

Overall, the NDA systems were determined to be adequate, satisfactorily implemented, and effective.

5.3.7 Performance Demonstration Program

The audit team examined PDP documentation and interviewed RFETS PDP personnel. The team specifically reviewed information from NDA PDP Cycle 10A (drum), NDA Cycle B3A (boxed waste), HSG PDP Cycle 17A, and RCRA PDP Cycle 10A.

Overall, PDP activities were determined to be adequate, satisfactorily implemented, and effective.

5.3.8 TRUPACT-II Operations/Waste Certification/Transportation

The audit team evaluated RFETS TRUPACT-II personnel training, payload certification, payload assembly, TRUPACT-II operations (TRUPACT-II assembly, disassembly, component inspections and cleaning, maintenance, payload loading, and leak testing), spare parts procurement and material control, calibration practices, and helium test certification, TRANSportation Tracking and COMmunication (TRANSCOM) qualification, and shipping documentation. The audit team observed RFETS payload assembly and loading, and TRUPACT-II leak testing for RFETS shipment numbers RF040123 and RF040124 to verify implementation of procedures. In addition, the audit team reviewed payload certification and shipping documentation for a number of previous RFETS TRUPACT-II shipments. One CDA and two Observations were identified as follows:

> RFETS Level II Certified Leak Test personnel training records did not contain practical examinations and scoring as required by RFETS Procedure 5-NDT-TC-1A and American Society for Nondestructive Testing Recommended Practice No. SNT-TC-1A. The RFETS Nondestructive Testing (NDT) Level III provided Helium Leak Test Level II Certification Practical Examination Checklists (Course No. 037-621-01) containing Practical Examination Test Scores and copies of the TRUPACT-II Leak Test Form used for qualification (CDA # 3).
>
> RFETS TRUPACT-II Leak Test Forms (RFETS Procedure PRO-1419-WO-LKTST, Appendix 1) were reviewed. The entries recorded on the forms indicated that vacuum during evacuation of the ICV Lid Space (Step # 7.2.4 [5]) and OCV Lid Space (Step # 7.3.4 [5]) sometimes exceeded the value of the current atmospheric pressure recorded during Step # 7.2.1 [3] (Observation 2).

- RFETS training documents for TRUPACT-II operations do not fully describe the subject matter being taught. DOE/WIPP 02-3183, CH Packaging Program Guidance, Attachment C – CH Packaging Qualification Requirements, Section III, B.5, B.6, and B.8 are not individually identified; they are covered under a more general heading. In addition, RFETS Hazard Reduction Technicians (HRTs) are not required to be specifically trained on how to determine if the SWB lift clip assemblies are locked in the proper position (DOE/WIPP 02-3183, CH Packaging Program Guidance, Attachment C – CH Packaging Qualification Requirements, Section II, A.5) (Observation # 3)

The audit team observed excellent job control techniques and cleanliness practices by RFETS personnel during TRUPACT-II operations and leak testing for RFETS shipment numbers RF040123 and RF040124

Overall, RFETS TRUPACT-II operations, waste certification, and transportation were determined to be adequate, satisfactorily implemented, and effective.

5.3.9 Soils/Solids Sampling

The audit team examined the soils/solid sampling program, which encompassed the small container, coring sampling methods, and tank sludge sampling. The audit team reviewed batch data reports and memos documenting the random selection of drums and sampling locations. Clean sampling equipment maintained in Building 460 was examined.

The audit team also examined the program for loading drums into SWBs and the process for assembling pipe overpack containers. The audit team reviewed data packages, logbooks, and calibration records.

Overall, Soils/Solids Sampling activities were determined to be adequate, satisfactorily implemented, and effective.

5.3.10 Solids Analysis

Soils/Solids analyses performed by the on-site analytical laboratory were audited. RFETS discontinued on-site analysis of soils/solids effective February 2004. Data packages were examined and interviews were conducted with the Laboratory Manager and QA Officer. Sample control of soils/solids samples was verified using chain-of-custody forms and interviews with the Laboratory Manager and QA Officer.

Project-level activities related to F-tests, relative percent difference (RPD) reporting, statistical sampling, and miscertification rate were also audited and were found to be effective, satisfactory and acceptable.

Data V&V was audited for all the above activities and found to be effective, satisfactory and acceptable.

Overall, Soils/Solids Analysis activities were determined to be adequate, satisfactorily implemented, and effective.

5.3.11 Gas Generation

The audit team interviewed personnel and reviewed documentation for Gas Generation. A walk-through was performed on March 30, 2004, of the operations facilities in Building 440. Gas Generation operations and equipment were demonstrated for the audit team. Training of Gas Generation operations personnel was also verified.

Overall, the Gas Generation processes were determined to be adequate, satisfactorily implemented, and effective.

5.3.12 WWIS/WEMS

The audit team evaluated implementation of RFETS procedures for the WEMS data validation, WWIS data entry, waste shipment using the e-TRAMPAC WWIS module, and generation of applicable documentation. The evaluation included a demonstration of RFETS WEMS data validation and the building of a shipment using e-TRAMPAC. The audit team verified that access control is established for WWIS and for WEMS data validation and that RFETS personnel are trained in WEMS and WWIS procedures. The audit team determined that characterization and certification data are assimilated into WEMS in an electronic format, reviewed, verified in that format, approved, and then electronically loaded into the appropriate WWIS data module. The audit team verified that appropriate controls are applied in WEMS to lock data once validated. The validation of WEMS data using RFETS site-specific record sources was determined to be adequate. The audit team determined that building of shipments is performed using the e-TRAMPAC module within WWIS and that payload completion data are collected from valid record sources and manually entered into this WWIS module. Documentation of payload assembly, approval, loading, and completion was evaluated and determined to be adequate. The audit team determined that implementation of RFETS procedures for WWIS data entry, shipment payload assembly, and shipment completion are adequate for container, TDOP, and SWB characterization, certification, and shipping.

Overall, WEMS data verification, WWIS data entry, and off-site shipment procedures were determined to be adequate, satisfactorily implemented, and effective.

5.4 General

Results of Previous Audits

The Observations and CARs resulting from the last CBFO recertification audit (A-03-03) were examined to determine if the conditions had been corrected. The audit team found no indication of recurrence of any of the previously identified problems.

Changes in Programs or Operations

The HWFP portions of the audit were performed to the latest B6 checklists, which incorporate all Class 1, 2, and 3 modifications to the HWFP.

New Programs or Activities Being Implemented

CBFO Audit A-03-02 (new VE Facility Building 371) and CBFO Audit A-03-04 (new VE Facility Building 440 and solid sampling of tank sludges) have been approved since the last recertification audit. CBFO Audit A-04-08 (removal of soil [S4000 soils/gravels] from Intermodal containers and placement into small containers [Vollrath cans] for subsequent sampling) was awaiting approval by NMED at the time of the audit.

Changes in Key Personnel

RFETS has not changed any key personnel since the last HWFP recertification audit (A-03-03). RFETS has added alternate key personnel to support increased characterization and certification activities, and as replacement personnel.

6.0 CORRECTIVE ACTIONS, OBSERVATIONS, AND RECOMMENDATIONS

6.1 Corrective Action Reports

During the audit, the audit team may identify conditions adverse to quality (CAQs) and document such conditions on CARs.

Condition Adverse to Quality (CAQ) – Term used in reference to failures, malfunctions, deficiencies, defective items, and nonconformances.

Significant Condition Adverse to Quality – A condition which, if uncorrected, could have a serious effect on safety, operability, waste confinement, TRU waste site certification, compliance demonstration, or the effective implementation of the Quality Assurance (QA) program.

No CARs were initiated during the audit.

6.2 Deficiencies Corrected During the Audit

During the audit, the audit team may identify CAQs. The audit team members and the Audit Team Leader (ATL) evaluate the CAQs to determine if they are significant using the following definitions:

CAQ – Term used in reference to failures, malfunctions, deficiencies, defective items, and nonconformances.

Significant CAQ – A condition which, if uncorrected, could have a serious effect on safety, operability, waste confinement, TRU waste site certification, compliance demonstration, or the effective implementation of the QA program.

Once a determination is made that the CAQ is not significant, the audit team member, in conjunction with the ATL, determines if the CAQ is an isolated case requiring only remedial action and therefore can be corrected during the audit. Upon determination that the CAQ is isolated, the audit team member, in conjunction with the ATL, evaluates/verifies any objective evidence/actions submitted or taken by the audited organization and determines if the condition was corrected in an acceptable manner. Once it has been determined that the CAQ has been corrected, the ATL categorizes the condition as a CDA according to the definition below.

CDAs – Isolated deficiencies that do not require a root cause determination or actions to preclude recurrence. Correction of the deficiency can be verified prior to the end of the audit. Examples include one or two minor changes required to correct a procedure (isolated), one or two forms not signed or not dated (isolated), and one or two individuals that have not completed a reading assignment.

CDA 1

RFETS packaged two Pu/Be sealed sources in an SWB (S03171). The shielding calculation for the SWB required the source to be centered in the SWB to comply with the 200 mR/hr limit on the payload container surface. The TRAMPAC does not allow internal shielding to be used to meet this limit, except for pipe overpack components. Relying on the internal bracing is not allowed by the TRAMPAC.

RFETS issued NCR 04-0489 to prevent the container from being shipped until a satisfactory shielding analysis is performed or the package is reworked. This was the only package of its type and is therefore an isolated instance.

CDA 2

There are inconsistencies in the AK record for soils regarding when the drums on Pad 903 began leaking and the list of hazardous constituents. These should be resolved through discrepancy resolution and/or clarification of the language in the AK Summary.

A memo was issued identifying AK discrepancies associated with drum leakage date/information, radioactive Contaminants of Concern and chemical Contaminants of Concern. Based on the review of these sources, it was determined that the hazardous waste characterization and assignment of EPA Waste Codes F001, F002, and F005 appropriately addressed the constituents identified by the AK Source Documents. Clarifications will be made in the AK Summary. It was also noted that the discrepancy in the date leakage began had no impact on the assignment of hazardous waste codes or other significant WAP-required information. The earlier date is well documented in several sources and assumed to be correct.

CDA 3

Leak Test Personnel Records do not reflect scores for practical examinations and no practical examination checklist has been generated for the practical examination.

RFETS NDE Level III provided copies of graded Helium Leak Test Level II Certification Practical Examination Checklist, Course No. 037-621-01 for each of the following RFETS Level II Leak Test personnel:

J. Renslaw
T. Palizzi
T. Neihart

The minimum grade for these personnel was 92%.

CDA 4

An obsolete record package exceeded the six-month temporary storage requirement prior to transmittal to the Waste Records Center.

The completed WIPP QA record package was sent to the Waste Records Center. Document Control personnel verified that no other completed WIPP QA records in the Document Control Center exceeded the six-month temporary storage requirement.

CDA 5

The Master Software List showed the description of the equipment incorrectly for the installation of software application #93 RF-MULTIPC-U235CAL-1.00-0402. The inventory showed installation on a single workstation as opposed to the actual network location.

It was determined that installation was performed and documented correctly and that the only error was the entry on the inventory report. To correct this deficiency, the RFETS Master Software List (MSL) database was updated and a new document printed.

CDA 6

Barcode 000155244, TBDR 664MP1-DP-050503, page 19 had a hand-written entry that was not initialed and dated.

Page 19 was revised to include an initial and date for the entry on March 31, 2004. The process for correcting WIPP QA records was followed when making the change.

7.0 SUMMARY OF OBSERVATIONS AND RECOMMENDATIONS

During the audit, the audit team may identify potential problems or suggestions for improvement that should be communicated to the audited organization. The audit team members, in conjunction with the ATL, evaluates these conditions and classifies them as Observations or Recommendations using the following definitions:

Observation – A condition that, if not controlled, could result in a CAQ.

Recommendations – Suggestions that are directed toward identifying opportunities for improvement and enhancing methods of implementing requirements.

Once a determination is made, the audit team member, in conjunction with the ATL, categorizes the condition appropriately.

7.1 Observations

The following Observations were provided to RFETS management as a result of the audit.

Observation 1

RFETS AK Summaries indicate that Cs-137 and Sr-90 are not expected radionuclides in the RFETS waste. At INEEL, CS-137 was detected in RFETS Building 774 sludge and the AK (at INEEL) was modified to indicate that Cs-137 is expected in RFETS waste. This inconsistency needs to be resolved.

Observation 2

The indicated amount of vacuum pulled on the TRUPACT-II vessel in steps 7.2.4.[5] and 7.3.4.[5] of RFETS Procedure PRO-1419-WO-LKTST, *TRUPACT-II Shipping Leak Test*, exceeds the value of the current atmospheric pressure recorded in step 7.2.1.[3] of the procedure.

Observation 3

1) Training Program documents do not fully describe the subject matter being taught to personnel. DOE/WIPP 0203183 Revision 1, Appendix C, identifies the subject matter to be covered. Appendix C, Sections III, B5, B6, and B8 are not individually identified; they are covered under a more general heading.
2) HRT personnel are not required to be trained specifically on how to determine if the lift clip assemblies are locked in the proper position (they are trained on how to operate the SWB adapter). Only crane operators are trained on determining if the lift clips assemblies are locked properly; however, crane operators do not attach the SWB adapters.

Recommendations

The following Recommendations were provided to RFETS management as a result of the audit.

Recommendation 1

The AK Summary does not include some information listed in supporting documents that should be included. It is recommended that the following items be addressed:

- The AK Summary for the 903 Pad soils indicates that the same weapons-grade plutonium isotopic mix, etc., as presented in the 018 Supplemental AK document and which applies to other waste generated at RFETS, also applies to the 903 Pad waste. The 018 Supplemental AK document states that a facility manufacturing process change occurred in 1957/1958; drums on the 903 Pad were placed there prior to 1958. Therefore, without further clarification in the AK summary, this may imply that the currently used radiological information may not apply to material on the 903 Pad. Simple clarification in the AK Summary is warranted.
- The AK Expert (AKE) indicated that although both uranium- and plutonium-bearing drums were placed on the 903 Pad, only those containing plutonium appear to have leaked (based on recent RI/RFI data), due potentially to CCl4-Pu radiolysis and subsequent corrosion. A statement regarding the plutonium content in the soils based on AK sampling data should be included.
- AK supplemental data indicate the quantity of plutonium in soils/sludges associated with the 903 drums. This information should be rolled up into the AK Summary (AKS).
- The AKE appears quite knowledgeable regarding historic plutonium/uranium operations in place during generation of wastes emplaced on the 903 Pad. Supplemental documents do not include much historical information, but these types of data (e.g., buildings in which 903 oils were generated, uranium vs. plutonium) should be included in the AKS (discussed in a memo to file that would be included as an AK source document).

Recommendation 2

It is recommended that the requirement to send a roll-up report to the Safety Assessment Center Manager (SACM) for TRU Waste Characterization Program (TWCP) Management Assessments be deleted since these assessments are not safety-related.

7.0 LIST OF ATTACHMENTS

Attachment 1: Personnel Contacted During the Audit
Attachment 2: Summary Table of Audit Results
Attachment 3: Table of Audited RFETS Implementing Procedures

PERSONNEL CONTACTED DURING THE AUDIT

RFETS PERSONNEL CONTACTED DURING AUDIT A-04-10				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Anglim, Cliff M.	SOM; Manager, DC	X	X	X
Armour, Faith	SOM; Records Specialist	X	X	
Arnold, Pat	MS; TWCP			X
Ballenger, Roger J.	TRU Program; TRU Waste Manager		X	X
Brugh, Mark	B559 Labs; Manager-Lab	X	X	
Burmeister, Mark	RISS- 903 Pad Project; Technical Supervisor	X	X	
Carpenter, Steve	MS; TRU WCO		X	
Chavez, Rickie	MS; HRT		X	
Ciucci, John	MS; Waste Ops	X		X
Crawford, Brenda	Measurements; Admin Support		X	
D'Amico, Eric	KH; TRU Program Engineer	X	X	X
Dahl, David	MS; QA/QE	X	X	
Daniels, Kevin	MS; ESH&Q Manager			X
Doolittle, Brenda	NDA; Operator		X	
Dreher, David	KH; NDA OPS MGR	X	X	X
Dunkel, Robert D.	Traffic Mgmt; Sr. Spec		X	
Durel, F. M.	KH; Measurements		X	
Edmiston, Douglas	MS; GGT MGR	X	X	
Edrich, Pam	Waste Systems (WEMS & WSRIC); Tech Manager		X	
Engholm, Eric	MS; HRT		X	

RFETS PERSONNEL CONTACTED DURING AUDIT A-04-10				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Englemann, Gislinde	Cal-Gamma; Chemist		X	
Erickson, David S.	MS; Gas Gen Supervisor		X	
Farris, Thomas	NDA; Database Administrator		X	
Ferrera, Carol	KH; TWCP PQAO	X	X	X
Fisher, Doug	B371 Operations; SME		X	
Floyd, David	MSWO; Headspace Tech Support		X	
Geis, J. A. 'Art'	KH; Site QA Program Manager	X	X	
Gillespie, Doyle	KH Quality Program; QA Engineer	X	X	
Goldsby, Tom	NDA Technical Supervisor		X	
Gorman, Lee	WRG; Wst Req Rep		X	
Grady, Frank	TRU Programs; TRU Waste Engineer	X	X	X
Green, Lonnie	MS; HRT		X	
Guyn, Terry	PEQA; QA Engineer		X	
Hale, Theresa.	MS; Supervisor		X	
Harrison, Jeff	Wastren; AKE	X	X	
Hart, Neil	KH; NDT Tech		X	
Heim, Robert R.	PEQA/PQA; Procurement Quality Engineer		X	
Hicks; David Alan	DOE/RFPO; TRU and LLW Project Lead	X		X
Hodgson, Rick E.	NDA; Technical Supervisor		X	

RFETS PERSONNEL CONTACTED DURING AUDIT A-04-10				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Johnson, Micky	Wastren; Sr Prin Eng	X	X	X
Kachun, Mark S.	MSQA; Waste Inspection Technical Lead		X	
Kirk, Nancy	MSQA; Assessor	X	X	X
Kirschenmann, Harley	SMQA; Manager	X	X	X
Kocsis, Frank	SOM; Program Manager	X	X	X
Lenarcic; Ken	Traffic/Transportation; Traffic Manager	X	X	X
Lewis, Leslie	TRU Waste Program; TRUPACT-II SME	X	X	
Long, Jerry W.	MS; Deputy PM	X		X
Longan, Peggy	MS; Compl. Tracking		X	
Mack, Lynn	TRU Programs; Scientist		X	
Major, Austin	NDA; Operator		X	
Mattson, Marty	Edison ESI/Metrology; Data Administrator		X	
McCarthy, Edward	Operations Manager Bldg. 440	X	X	X
McElhaney, S. A.	MS; Measurements Manager		X	X
McGrory, Mark S.	RISS; Manager TRU Repack	X		X
McKinney, Ruth	Source One; Exec VP	X	X	X
Medina, Anthony	MS; Safety Manager	X		
Melberg, Tim	PEQA; Manager	X	X	
Melick, George	KH; NDT Tech		X	
Mensik, Mark	QAO- HSGS	X	X	X
Michaud, Paul	MS ESH&Q; Management Assessment Coordinator		X	
Moody, David W.	TRU; SME		X	X
Moore, Timothy	MS; Headspace Supervisor		X	

RFETS PERSONNEL CONTACTED DURING AUDIT A-04-10				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Nielsen, Natalie	Records Spec/WRC		X	
Nolan, Thomas C.	LATA/Rad Lab; Chemist		X	
O'Leary, Jerry	KH/TRU Waste Project Manager	X	X	X
Owens, Michael G.	Procurement Programs; Manager		X	
Papp, Michael J.	WSRIC; Backlog Program Lead		X	
Peterson, Ruth	RFCSS; Transportation Specialist		X	
Philips, Karen	RF/TRU Program; TRU Sampling SME		X	X
Pigeon, Paul	MS/Training Programs; TWCP Training Officer	X	X	X
Pless, Karen	RFCSS; Secretary		X	X
Podolsky, Stewart	RISS; QA Lead	X	X	
Renslow, J. A.	KH; NDT Tech		X	
Rivera, Mike	TRU Program; Gas Gen	X	X	
Robledo, Ron	TRU Programs; Engineer	X	X	
Rodgers, Alan	KH/Deputy Material Stewardship	X		
Roth Jr., John	061 Warehouse; Crew Leader		X	
Rouse, Sue	MS TRU Waste; Tech Writer		X	
Santangelo, Debra	MS; HRT		X	
Sayler, Cheryl	WC&O; WNCR Coord		X	
Schoen, Jim	Waste Systems; WSRIC Program Lead		X	
Sendelweck, Vivian	Wastren; AKE	X	X	X
Sisk, Susan	MSQA; QA Engineer		X	X
Slottke, Ronald J.	KH; PCMT Systems	X		

RFETS PERSONNEL CONTACTED DURING AUDIT A-04-10				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
	Manager			
Smart, Kim	KH/IRM; Manager	X	X	X
Smith, Dan	PEQA; Compliance Specialist (Source Insp.)		X	
Smith, Scott	Wastren; AKE	X	X	X
Spears, Mark	KH; VP/Project Manager			X
Stewart, Judith	Measurements; NDA WIPP Coordinator	X	X	X
Straub, Elizabeth	Procurement; Procurement Agent		X	
Stunson, Ernie	Edison ESI/Metrology; Project Mgt		X	
Tallman, Steve	RFCSS; NDT Manager		X	
Tressell, John	MSQA; TRU Waste QA, PQAO Alternate	X	X	X
Trivett, Airrus	ICT; QA Manager	X	X	X
Turner, Charles A.	MS; Headspace Manager	X	X	X
Wilson, Jeff D.	Waste Systems; WEMS Administrator		X	
Wolfe, Mike	SOM; Waste Records Center Manager	X	X	X

Summary Table of Audit Results

Documents	Concern Classification					Q
	CARs	CDAs	Obs	Rec	EP	Adequac
Activity						
Acceptable Knowledge		2	1	1		A
Visual Examination		1				A
Real Time Radiography						A
Headspace Gas						A
QA Program and Organization						A
Project Level V&V						A
WWIS/WEMS						A
Training and Assessments						A
PDP						A
Solids Sampling						A
Nondestructive Assay (NDA)		6				A
Software		5				A
Sample Control						A
Solids Analysis						A
Records and Documents		4		2		A
Quality Improvement						A
Inspection and Test						A
Transportation		3	2, 3			A
Procurement						A
Gas Generation						A
TOTALS	0	6	3	2	0	A

Definitions

E = Effective
S = Satisfactory
I = Indeterminate
M = Marginal
U = Unsatisfactory

CAR = Corrective Action Report
CDA = Corrected During Audit
EP = Exemplary Practice
NE = Not Effective

Obs - Observation
Rec = Recommendation
A = Adequate
NA = Not Adequate

RFETS DOCUMENTS AUDITED FOR A-04-10		
No.	**Procedure Number**	**Title**
1.	PRO-484-WIPP-003	Collection, Review, and Confirmation of Acceptable Knowledge
2.	RMRS-WIPP-98-100	Acceptable Knowledge TRU/TRM Waste Stream Summaries
3.	RF/RMRS-97-018	RF/RMRS Waste Acceptable Knowledge Supplemental Information
4.	1-C80-WO-1102-W/RT	Waste/Residue Traveler instructions
5.	PRO-543-ASD-002	Initiation, Preparation, and Implementation of COC Forms
6.	PRO-908-ASD-004	On-Site Transfer and Off-Site Shipment of Samples
7.	5-NDT-TC-1A	Training, Qualification, and Certification of Nondestructive Testing Personnel
8.	4-K47-WEM-WP1210	WEMS Offsite Shipping Module
9.	4-W30-NDT-00664	RTR Testing of Transuranic and Low-Level Waste in Building 664
10.	L-1000	Requirements for Radiological Laboratories L-Procedures
11.	PRO-815-DM-01	Developing, Maintaining, and Controlling Documents
12.	L-4026	Records Handling, Storage & Retrieval for the WIPP Project File
13.	PRO-767-WIPP-001	Waste Records Center Processing
14.	1-PRO-079-WGI-001	Waste Characterization Generation and Packaging
15.	4-H19-WSRIC-001	WSRIC Characterization and Reverification
16.	95-WP/SAP-001	Transuranic (TRU/TRM) Waste Sampling Plan
17.	PRO-943-WIPP-007	TRU Waste Characterization Program Conditions Adverse to Quality Trending and Analysis
18.	1-A65-ADM-15.01	Control of Nonconforming Items
19.	PRO-U76-WC-4030	Control of Waste Nonconformances
20.	PLN-97-007	TRU Waste Characterization Program Training Implementation Plan
21.	PRO-264-RS-0141	Data Review and Verification of Residue Repack Batch Reports
22.	PRO-544-SALT REPACK-371	Residue Repack, Building 371
23.	PRO-603-RS-0152	Data Review and Verification of Repack Sampling Batch Reports
24.	PRO-860-RS-0156	Repack Sampling, Building 371
25.	RS-012-004	Grid Method – Repack Solid Sampling and Analysis Plan
26.	RS-012-005	Cone & Quartering Method – Repack Solid Sampling and Analysis Plan
27.	1-M12-WO-4034	Solid Radioactive Waste Packaging Requirements
28.	4-D99-WO-1100	Solid Radioactive Waste Packaging
29.	PRO-1018-SWB-371	Standard Waste Box Drum Selection and Grouping
30.	PRO-1031-WIPP-1112	TRU/TRM Waste Visual Verification (V2) and Data Review
31.	PRO-1411-WO-WASTE	Waste Receiving, Handling and Transfer
32.	PRO-1471-VE-771	Visual Examination for Confirmation of RTR, B771
33.	PRO-284-POC-001	Pipe Overpack Container Initial Assembly Process

RFETS DOCUMENTS AUDITED FOR A-04-10		
No.	**Procedure Number**	**Title**
34.	PRO-823-REPACK-371	Combustible Residue Repackaging
35.	PRO-830-DRUM-371	Drum Loading into Standard Waste Boxes
36.	PRO-W90-FO-0103	Balances
37.	L-1006	Maintenance Records for analytical Instrumentation
38.	L-4035	Metals Data Validation and Verification
39.	L-4038	WIPP Data Review and Validation for Volatile Organic Compounds
40.	L-4039	WIPP Data Review and Validation for Semi-Volatile Organic Compounds in Solid Samples
41.	L-4150	Total Metals Acid Digestion Procedure of Solid, Liquid, and TCLP Extract Samples
42.	L-4151	Waste Analysis by Atomic Absorption Spectroscopy
43.	L-4152	Mercury Analysis in Waste (Cold-Vapor Technique)
44.	L-4153	Trace Metals by ICP Spectrometry (Solids, Liquids, and TCLP Extracts)
45.	L-4165	GC/MS Determination of Volatile Organic Compounds
46.	L-4214	Extraction of Total SVOCs for GC/MS Analysis for WIPP
47.	L-4215	GC/MS Determination of Total SVOCs for WIPP
48.	ASD-003	Identification System for Reports and Samples
49.	PRO-1351-440-SWB	Room 113 Perma-Con Operations
50.	PRO-944-WIPP-008	Completion of Waste Stream Profile Form for Waste to be Disposed of at WIPP
51.	PRO-945-WIPP-009	RCRA Characterization of TRU Waste to be Disposed of at WIPP
52.	PRO-940-WIPP-010	WIPP TRU Waste Characterization Project Level Data Review and Reporting
53.	4-F72-WEM-WP1205	WEMS and WSRIC Software Quality Assurance Compliance
54.	L-4052	Headspace Gas Sampling and Analysis Using an Automated Manifold Qualification Plan and Test
55.	L-4217	Metals Analysis Data Compilation and Reporting
56.	PRO-1265-SS-001	Building 774 and Tank T-207 Aqueous Sludge Removal and Characterization Plan
57.	PRO-1266-SS-002	Tank Sludge Removal from Pre-Selected Areas, Building 774
58.	PRO-1358-440-VERP	Glovebox and C-Cell Waste Operations
59.	PRO-1569-SAP-001	Polymerized Organic and Inorganic Liquid Process – Sampling and Analysis Plan
60.	PRO-1585-PWS-440	Polymerized Waste Sampling – Building 440
61.	PRO-1618-PLP-001	Data Review and verification of Solid Sampling Batch Data Reports – TRU Projects
62.	PRO-1623-SCWS-440	Small Container Waste Sampling
63.	PRO-1669-HGAS-V&V	Headspace Gas V&V (Data Generator Level)
64.	PRO-1674-Sources/Standards-Load/Unload	Sources/Standards Loading and Unloading In Matrix Containers in Building 440 and 664
65.	PRO-1676-HGAS-S&A	Headspace Gas Sampling and Analysis using an On-Line Integrated System

RFETS DOCUMENTS AUDITED FOR A-04-10		
No.	**Procedure Number**	**Title**
66.	L-4108	Toxicity Characteristic Leaching Procedure (TCLP) for Metals in Waste
67.	PRO-1608-VECRTR-371	RTR Visual Examination Confirmation, Building 371
68.	PRO-1628-A2-001	Tank Sludge Removal from PreSelected Areas, Tank T-207
69.	PRO-1729-903-SOIL	Soil Removal from Pre-Selected Areas, 903 Pad
70.	PRO-1730-903-001	903 Pad Removal/Repack and Characterization Plan
71.	PRO-1520-Mobile-RTR	Mobile Real-Time Radiography Testing of Transuranic and Low-Level Waste
72.	RS-020-012	Ash Residue Repack, Process Control Plan
73.	RS-020-013	Dry Residue Repackaging Process Control Plan
74.	RS-020-018	Combustible Residue Repackaging Process Control Plan
75.	RS-020-021	Salt Residue Repack, Buildings 371 and 707 Process Control Plan
76.	PRO-717-HDGAS-S&A	Headspace Gas Sampling, Building 371
77.	95-QAPjP-0050	RFETS TRU Waste Characterization Program Quality Assurance Project Plan
78.	1-MAN-008-WM-001	RFETS TRU Waste Management Manual
79.	PRO-108-PREP-01	Preparation of NDA Performance Demonstration Program Samples
80.	PRO-845-NDA-008	Data Review, Verification and Validation for NDA Measurement Systems
81.	PRO-731-MC-002	NDA Measurement Control Program
82.	PRO-1298-ISOANAL-371	Gamma-Ray Isotopic Analysis Analysis of Plutonium-Bearing Solids in Building 707 and Building 371 Cal/Gamma Laboratory
83.	PRO-1302-WIPPDATA-371	Data Review and Validation for Calorimetric Assay for WIPP-TRU Waste Characterization Program
84.	PRO-1072-NDA-MSQ	Matrix-Specific Qualification for NDA Can Counters
85.	PRO-1299-AIRBATH-371	Calorimetry Using the Antech Airbath System in Building 371 Cal/Gamma Laboratory
86.	PRO-1290-TRIFID-371	TRIFID Gamma-Ray Isotopic Analysis System Qualification
87.	PRO-1297-CLC&RPT-371	Calorimetry/Gamma-Ray Assay Calculation and Reporting of Results
88.	L-4028	Sample Administration for the Radiological Laboratories
89.	MAN-094-TPM	Training Program Manual
90.	MAN-066-COOP	Site Conduct of Operations Manual
91.	3-X31-CAP-001	Corrective Actions Process
92.	1-V10-ADM-15.02	Stop Work Action
93.	MAN-062-Cause Analysis	Cause Analysis Requirements Manual
94.	1-D97-ADM-16.01	Occurrence Reporting Process
95.	MAN-131-QAPM	Quality Assurance Program Manual
96.	1-V51-COEM-DES-210	Site Engineering Process Procedure
97.	1-J55-ADM-08.10	Subcontractor Quality Evaluations
98.	PRO-1034-PEQA	Procurement Engineering and Quality Assurance

RFETS DOCUMENTS AUDITED FOR A-04-10		
No.	**Procedure Number**	**Title**
99.	PRO-J44-RC&I-6600	Procured Item Acceptance and Certification
100.	1-A67-QAP-08.01	Identification and Control of Items
101.	1-PRO-072-001	Inspection & Acceptance Test Program
102.	PRO-X05-WC-4018	TRU Waste Certification
103.	MAN-092-M&TEM	Measuring and Test Equipment Management Manual
104.	L-4031	Software Quality Assurance Plan for the Radiological Laboratories
105.	PRO-548-SSOC-SQA	Software Management for Nondestructive Assay Systems
106.	1-MAN-004-CSMM	Computer Software Management Manual
107.	1-V41-RM-001	Records Management Manual
108.	1-PRO-087-WEMS-WP-1201	WEMS Waste Package Inventory, Tracking, and Control
109.	1-PRO-Q11-WO-1221	Controls for Updating Waste Package Information in WEMS
110.	1-MAN-039-WEM-WP-1200	WEMS Program Management Manual
111.	PRO-486-WIPP-006	TRU Waste Characterization Project Quality Assurance Grading
112.	1-C20-QAP-09.01	Control of Processes
113.	PRO-T13-Traffic-306	Labeling and Marking TRUPACT Containers
114.	3-W24-MA-002	Kaiser-Hill Management Assessment Program
115.	1-W37-IA-002	Integrated Planning & Scheduling of Independent Assessment Activities
116.	3-B52-IA-003	Conduct of Independent Assessment Activities
117.	1-N92-ADM-02.03	Training, Qualification and Certification of Independent Auditors and Assessors
118.	PRO-1386-TGS-371	Setup and Calibration of Building 371 Tomographic Gamma Scanner (TGS)
119.	PRO-1392-TGS-371	Operating the Building 371 Can Tomographic Gamma Scanner (TGS)
120.	PRO-1393-LN2-371	Filling Transfer and Detector Head Dewars in Building 371
121.	PRO-1400-NDA	NDA Evaluation of Item Description Code (IDC) Changes
122.	PRO-440-RS-0149	GGTP Drum Selection and Batching
123.	PRO-604-RC-001	Field Sample QC Data Calculations, Review, and Validation Batch Reports
124.	PRO-962-MGSS-001	Mobile Gas Generation Testing Sampling System (MGSS) Sampling Operations
125.	PRO-963-MGSS-001	Mobile Gas Generation Testing Sampling System Data Calculation
126.	PRO-N01-RES-030-001	Gas Test Canister Operations
127.	RS-020-001	Gas Generation Testing QAPjP
128.	PRO-1045-WI-001	Solid Radioactive Waste Inspection
129.	PRO-1132-WIPP-012	Preparation of an Interface Document for Vendor Owned or Operated Systems
130.	4-G83-WEM-WP-1209	WEMS Waste Package Verification and Certification
131.	PRO-1003-WSRIC-Admin	WSRIC Administration guidance
132.	PRO-1037-WEMS-97-107	WEMS System Administration Guidance
133.	PRO-1038-WEMS-97-108	WEMS and WSRIC Software Validation Specification Development

RFETS DOCUMENTS AUDITED FOR A-04-10		
No.	**Procedure Number**	**Title**
134.	1-PRO-110-WP-1212	WIPP Waste Information System (WWIS) Data Entry
135.	PRO-1329-DM-02	Site Document Control
136.	MAN-T91-STSM-001	Site Transportation Safety Manual
137.	PRO-T95-OSTP-002	Off-Site Transportation Procedure
138.	MAN-010-MCA	Materials Control and Accountability
139.	PRO-T43-TRAFFIC-528	TRUPACT-II Operations Flow
140.	PRO-1418-WO-TRUOP	TRUPACT-II Operations
141.	PRO-1419-WO-LKTST	TRUPACT-II Shipping Leak Test
142.	MAN-134-PPM	Procurement Program Manual
143.	PRO-1092-FRAM-569	Operating Building 569 FRAM Gamma Spectroscopy System
144.	PRO-957-SuperHENC	Operating the Super High Efficiency Neutron Coincidence (SuperHENC) Counter Mobile Assay system
145.	PRO-1405-PREP-02	Preparation of Boxed Waste Performance Demonstration Program (PDP) Samples for Nondestructive Assay
146.	PRO-T30-Traffic-515	Preparation and Retention of Shipping Papers
147.	MAN-001-SDRM	Site Document Requirements Manual
148.	MAN-071-ICWP	Integrated Work Control Program Manual
149.	PRO-077-WIPP-005	Management of Waste Information Prior to Transmittal to the Waste Records Center
150.	PRO-666-PADC569	Operating Building 440 Passive/Active Drum Counter
151.	PRO-856-RS-0153	Gas Generation Test Data Reduction and Reporting
152.	PRO-1433-MPCC-664	Operating the Multi-Purpose Crate Counter (MPCC) at Building 664
153.	PRO-1541-SLLP	Site Lessons Learned Process
154.	PRO-1566-NDA-STD	Evaluating NDA Standards for continued use
155.	PRO-1570-NDA-QUAL	Qualification Requirements for NDA Large Package Counters
156.	PRO-1655-HGGT-1954	Heated Gas Test Canister Operations
157.	PRO-1654-NHGGT-1983	Non-Headed Gas Test Canister Operations
158.	PRO-1668-SQA	TRU Waste Characterization Program Software Quality Assurance
159.	PRO-1406-SWB	Standard Waste Box Repair/Replacement Operations
160.	PRO-1631-TGS-01	Setup and Calibration of Building 664 Drum Tomographic Gamma Scanner (TGS)
161.	PRO-1632-TGS-02	Operating Building 664 Drum Tomographic Gamma Scanner (TGS)
162.	PRO-1649-LN2-664, 440	Filling Detector Head Dewars in Building 664, 440, and SuperHENC and MPCC Mobile Assay Trailers
163.	L-4048	Radiological Laboratories Quality Assurance Plan
164.	PRO-985-SURV	Performance of Surveillances